

Applicant: Rudolf et al.
Application No.: 10/726,374

REMARKS/ARGUMENTS

After the foregoing amendment, claims 1–15 and 23–40 are currently pending in this application. Claims 16–22 have been canceled without prejudice. Claims 1–4 and 9–11 have been amended to remove the phrase “the steps of” from the preamble. Claims 3, 5, 8, 11, and 12 have been amended to remove phrases containing the term “step”. Claims 23–25, 27–29, 31, and 32 have been amended to remove the “means” language. New claims 37–40 has been added to recite additional subject matter. Applicants submit that no new matter has been introduced into the application by these amendments.

Allowable Subject Matter

The Examiner is thanked for indicating that claims 2, 3, and 9 contain allowable subject matter.

Claim Rejections — 35 USC §103(a)

Claims 1, 4–8, and 10–36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,116,944 to Das et al. (hereinafter “Das”) in view of U.S. Patent No. 7,170,876 to Wei et al. (hereinafter “Wei”).

Das relates to a method and apparatus for feedback error detection. In particular, Das relates to a problem in a closed loop transmit diversity scheme in

which signaling errors on a feedback channel can lead to the use of the wrong antenna weights (column 1, lines 33–36). To address this problem, a mobile station attempts to determine the antenna weights actually applied at a base station and uses the determined antenna weights for processing subsequent transmissions (column 1, lines 61–64).

In Das, when the base station receives a feedback message, it determines whether the feedback message contains channel quality information (CQI) or antenna control information (ACI) (column 6, lines 42–44 and 60–67). In one embodiment, Das uses a six bit feedback information and checks specific bits of the feedback information to determine whether the feedback information contains CQI or ACI (column 7, lines 27–47). The base station performs different operations depending on whether the received feedback CQI or ACI (column 6, lines 48–64).

Wei relates to an outer-loop scheduling design for systems with channel quality feedback mechanisms. In one embodiment of Wei, a base station determines energy levels of symbols received in a CQI channel (column 7, lines 47–49). Two methods are disclosed to determine the energy level of a symbol: examine the CQI bits that have been sent on the CQI channel and configure a CQI decoder in the base station to determine whether the received bits correspond to a valid codeword hypothesis (column 7, lines 52–64).

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The Examiner argues that Das teaches the steps of computing a decision metric value for each symbol in the CQI message, determining a largest decision metric value, and determining a second largest decision metric value. Applicants respectfully disagree with this position. As described above, Das checks the received feedback information to determine whether it is CQI or ACI, and there are several methods disclosed as to how to make this determination (see column 6, line 48 to column 7, line 47). Das does not teach comparing a maximum CQI with a threshold, nor comparing a CQI change of current and previous CQI values to a threshold as argued by the Examiner (Office Action, page 2).

According to Das, at column 7, lines 57-60,

if the FBI [feedback information] contains CQI, operations proceed to step 312, to schedule and select transport format (TF) of future transmissions using the extracted channel quality information.

Based on this passage, it is clear that Das does not process the CQI as recited in claim 1. The processing performed by Das is merely to determine whether the received feedback information contains CQI or ACI. Combining the teachings of Wei with Das does not overcome the deficiencies of Das. Therefore, because the combination of Das and Wei fails to teach all of the steps of claim 1, claim 1 is distinguishable over Das and Wei.

Claims 2–9 are dependent upon claim 1, which the Applicants believe is allowable over Das and Wei for at least the same reasons provided above.

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In regard to claim 10, the arguments made above in connection with claim 1 are equally applicable. In particular, the combination of Das and Wei fails to disclose the steps of obtaining at least two different values representative of the decoded CQI message and comparing the at least two values to determine the reliability of the CQI message.

Therefore, because the combination of Das and Wei fails to teach all of the steps of claim 10, claim 10 is distinguishable over Das and Wei. Claims 11–15 are dependent upon claim 10, which the Applicants believe is allowable over Das and Wei for the same reasons provided above.

Claims 23, 29, and 33 are distinguishable over the combination of Das and Wei for at least the same reasons as presented above in connection with claim 1. Claims 24–28, 30–32, and 34–36 are dependent upon claims 23, 29, and 33, respectively, which the Applicants believe are allowable over Das and Wei for the same reasons provided above.

Based on the arguments presented above, withdrawal of the 35 U.S.C. §103(a) rejection of claims 1, 4–8, and 10–36 is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a

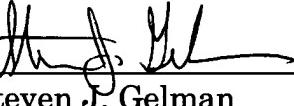
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telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1-15 and 23-40, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

Rudolf et al.

By 
Steven J. Gelman
Registration No. 41,034

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103
Telephone: (215) 568-6400
Facsimile: (215) 568-6499
SJG/mnr